

Job Title: CIVIL ENGINEER V - MIXTURES CONTROL ENGINEER - IPR#46488

Agency : Department of Transportation

Closing Date/Time: 04/11/2023

Salary: \$6,445 - \$10,210 Monthly

Job Type: Salaried Full Time

County: Peoria

Number of Vacancies: 1

Plan/BU: NR916 - Protech Teamsters

***This position is covered by the Revolving Door Prohibition Policy.**

This position is a union position; therefore, provisions of the relevant collective bargaining agreement/labor contract apply to the filling of this position.

All applicants who want to be considered for this position MUST apply electronically through the illinois.jobs2web.com website. State of Illinois employees should click the link near the top left to apply through the SuccessFactors employee career portal. Applications submitted via email or any paper manner (mail, fax, hand delivery) will not be considered.

Agency Mission Statement

The Illinois Department of Transportation is seeking to hire a Mixtures Control Engineer.

The IDOT team works diligently to provide safe, cost-effective transportation for Illinois in ways that enhance quality of life, promote economic prosperity and protect our environment. We are problem solvers and leaders, constantly searching for innovations and improvements in support of our commitment to providing the best multimodal transportation system for Illinois.

Our team fosters a culture of inclusivity. We value diversity and hold ourselves to the highest ethical standards as we work together for a common purpose. Team members frequently collaborate with colleagues and others outside the department to best meet customer needs.

The department offers extensive training and career advancement opportunities. Employees also receive a robust benefit package including:

- Monday-Friday work schedule
- Flexible work schedules are available in many program areas
- Health, Life, Vision, and Dental Insurance
- Pension Plan
- (10) Weeks paid Maternity/Paternity Leave
- Deferred Compensation Program and other pre-tax benefit programs (Medical/Daycare)
- Employees earn (12) paid Sick Days annually
- New Employees earn (10) paid Vacation Days their first year of service and can earn up to (25) paid Vacation Days annually
- Employees earn (3) paid Personal Days annually
- (13-14) paid holidays annually (based on start date)
- Tuition Reimbursement

We invite qualified applicants to apply to become part of our team. We are confident that you will take pride in serving Illinois and its residents and visitors.

Job Responsibilities

This position is accountable for planning and directing those activities that ensure bituminous concrete, portland cement concrete, and related mixtures are acceptable for use on state and local highway projects involving federal, state, and Motor Fuel Tax funds.

Subordinate Personnel: 2 Direct; 8-12 Indirect
Number of Projects Annually: 80-140
Annual Value of Mixtures: \$25 to \$100 Million Per Year
Number of Plants: 25 to 30

This position reports to the Materials Engineer. Reporting to this position are the Portland Cement Concrete Mixture Control Technician and the Bituminous Mixtures Control Supervisor.

The incumbent is responsible for the quality of portland cement concrete (PCC), bituminous concrete, and other mixtures produced in the district and used in transportation facility improvements. This is achieved by, 1) utilizing properly inspected aggregates and materials, 2) supervising the design and proportioning of each mixture, 3) surveying and calibrating the mixture producer's plants to assure predictable uniformity of mixtures, 4) daily inspection, sampling, testing, and adjusting of mixes, and 5) coordinating the Quality Assurance program. These functions require expertise in materials, the interaction of components of a mixture, and the resultant effects on the properties of the final products. The incumbent must impart this required expertise to subordinates in order for the district to accomplish projects within departmental and district standards.

Typical problems include assuring acceptable mixture designs to improve skid resistant properties and other safety and wear features of pavement surfaces; approving the design of new mixtures thereby reducing the demand for scarce materials and enabling the use of available by-products; determining the capability of sophisticated electronic plant proportioning equipment; determining the value and use of complex chemical additives and the impact of experimental products on mixtures, evaluating the effectiveness of consultant testing equipment and consultant personnel engaged in materials proportioning and inspection; and establishing district policy in the areas of material and equipment testing and specification interpretation.

The greatest challenge to this position is to economically extend pavement life and improve highway safety through the proper design and inspection of portland cement concrete mixtures and bituminous mixtures in accordance with department policies.

(Job Responsibilities continued)

The incumbent personally determines whether portland cement concrete materials will be incorporated in projects in those instances where questions arise as to material acceptability, approves portland cement concrete mixture designs to meet unusual project demands, ensures prompt investigation and resolution of complaints regarding mixture design, evaluates subordinate performance, determines subordinate training needs, recommends appropriate action, and ensures departmental safety rules.

The incumbent accomplishes accountabilities through the following personnel:

Portland Cement Concrete Mixtures Control Technician - who trains and supervises 1 - 3 technicians concerning P.C. Concrete proportioning and plant operation, conducts plant surveys and calibrations, and assists in Independent Assurance Testing programs.

Bituminous Mixtures Control Supervisor - who trains and supervises 5 - 6 technicians concerning design and proportioning as well as nuclear density

testing at laydown operations; conducts bituminous plant inspections and calibrations; monitors performance of bituminous mixtures produced; and supervises in the Quality Assurance program.

The incumbent operates within the guidelines of the Standard Specifications but is required to exercise considerable technical judgment in designing and establishing appropriate inspection procedures for portland cement concrete mixtures, establishing proper density and compaction procedures, and evaluating the impact of substitute materials on the effectiveness of existing mixtures.

The incumbent has frequent contacts with district personnel in the Construction and Local Roads Sections, the Bureau of Operations, and Program Development, and the Division of Aeronautics to coordinate schedules to insure the timely and effective proportioning and inspection of mixtures. The incumbent is involved in the development of special provisions covering unique mixture problems with the Bureau of Program Development, the central Bureau of Materials and Physical Research, and the Federal Highway Administration. They deal continuously with contractors, consultants, material suppliers and local officials to insure understanding of guidelines governing conditions of material acceptability. Travel is required within the district.

The effectiveness of this position can be measured by the performances of the various Hot Mix Asphalt (HMA) and PCC mixtures produced for use on transportation projects throughout the district, by the ability of subordinate personnel to recognize production, and placement problems and react to them in a timely and professional manner.

Principal Accountabilities

1. Approves HMA and portland cement concrete mixtures for use on highways and other transportation facilities.
2. Establishes appropriate inspection methods for density and compaction procedures that ensure material acceptability on highways.
3. Responsible for the implementation and coordination of the HMA and PCC Quality Control/Quality Assurance programs.
4. Determines the acceptability of substitute materials and chemical additives in mixture designs.
5. Accountable for the efficiency of the Mixture Control Section, including personnel assignment and training.
6. Performs other duties as assigned.
7. Performs duties in compliance with departmental safety rules. Performs all duties in a manner conducive to the fair and equitable treatment of all employees.

Qualifications

Position Requirements

- Education/Experience
 - Current registration as a Licensed Professional Engineer in the state of Illinois PLUS
 - Five years of experience in civil engineering
- Valid Illinois driver's license
- Districtwide travel

Districtwide travel

- Extensive knowledge of materials and mixture designs/controls
- Ability to supervise, train, and motivate subordinate personnel
- Strong oral and written communications skill

Work Hours: 8:00AM - 4:30PM Monday - Friday

Work Location: 401 Main St Peoria, IL 61602-1267

Work Office: Office of Highways Project Implementation, Region 3/District 4/Bureau of Project Implementation

Agency Contact: DOT.CONTACTHR@ILLINOIS.GOV

Job Family: Transportation; Administration/Management; Sciences and Natural Resources

APPLICATION INSTRUCTIONS

Use the “Apply” button at the top right or bottom right of this posting to begin the application process.

If you are not already signed in, you will be prompted to do so.

State employees should sign in to the career portal for State of Illinois employees – a link is available at the top left of the Illinois.jobs2web.com homepage in the blue ribbon.

Non-State employees should log in on the using the “View Profile” link in the top right of the Illinois.jobs2web.com homepage in the blue ribbon. If you have never before signed in, you will be prompted to create an account.

If you have questions about how to apply, please see the following resources:

State employees: Log in to the [career portal](#) for State employees and review the [Internal Candidate Application Job Aid](#)

Non-State employees: on Illinois.jobs2web.com – click “Application Procedures” in the footer of every page of the website.

The main form of communication will be through email. Please check your “junk mail”, “spam”, or “other” folder for communication(s) regarding any submitted application(s). You may receive emails from the following addresses:

- donotreply@SIL-P1.ns2cloud.com
- systems@SIL-P1.ns2cloud.com